CBSE Class 10 – Science

Practice Question Paper – Set 1

Time: 3 Hours
Maximum Marks: 80

GENERAL INSTRUCTIONS

1. All questions are compulsory.
2. The question paper consists of **5 Sections A, B, C, D and E**.
3. Use of calculators is not permitted.
4. Diagrams should be neat and properly labelled.

SECTION A – MCQs

(1 × 20 = 20 Marks)

1. Which of the following is a homologous series?
   (a) Alkanes
   (b) Alcohols
   (c) Carboxylic acids
   (d) All of these
2. The functional group present in ethanol is:
   (a) –COOH
   (b) –CHO
   (c) –OH
   (d) –CO
3. The unit of electric power is:
   (a) Volt
   (b) Ampere
   (c) Ohm
   (d) Watt
4. Which hormone regulates blood sugar level?
   (a) Thyroxine
   (b) Insulin
   (c) Adrenaline
   (d) Estrogen
5. The process by which plants lose water vapour is called:
   (a) Respiration
   (b) Transpiration
   (c) Translocation
   (d) Excretion

6. Which mirror is used as a rear-view mirror in vehicles?
   (a) Concave
   (b) Convex
   (c) Plane
   (d) Cylindrical
7. The chemical formula of washing soda is:
   (a) $NaHCO_3$
   (b) $Na_2CO_3 \cdot 10H_2O$
   (c) Na_2CO_3
   (d) NaOH
8. Which gas is released during respiration?
   (a) Oxygen
   (b) Nitrogen
   (c) Carbon dioxide
   (d) Hydrogen
9. The SI unit of resistance is:
   (a) Ampere
   (b) Volt
   (c) Ohm
   (d) Watt
10. The focal length of a convex lens is taken as:
    (a) positive
    (b) negative
    (c) zero
    (d) infinite

11–20. MCQs from **Life Processes, Acids–Bases–Salts, Light, Electricity, Heredity, Environment, Resources**.

SECTION B – Very Short Answer

(2 × 5 = 10 Marks)

21. Define homologous series.
22. Write the chemical formula of quicklime.
23. Name the hormone responsible for growth in plants.
24. State Ohm’s Law.
25. Write one function of the human kidney.

SECTION C – Short Answer

(3 × 6 = 18 Marks)

26. Explain the process of respiration in humans with the help of a diagram.
27. What is electrolysis? Describe an activity to show electrolysis of water.

28. Distinguish between concave mirror and convex mirror (any three points).
29. Explain how sex is determined in human beings.
30. What is a food chain? Write a food chain operating in a grassland ecosystem.
31. Write any three differences between acids and bases.

SECTION D – Long Answer

(5 × 5 = 25 Marks)

32. Explain the process of photosynthesis with the help of a labelled diagram.
33. Derive the formula for electric power. State its SI unit.
34. Describe an experiment to show that carbon dioxide is necessary for photosynthesis.
35. Explain Mendel's monohybrid cross with the help of a Punnett square.
36. What is sustainable development? Explain its importance.

SECTION E – Case Study Based Question

(5 Marks)

37. **Case Study: Electricity**

A student connects three resistors of 2 Ω, 4 Ω and 6 Ω in series to a battery.

Answer the following questions:

a) What is the total resistance of the circuit?
b) If the current flowing is 1 A, find the potential difference across the circuit.
c) Which law is used to calculate the current and voltage relationship?

□ ANSWER KEY / MARKING POINTS (Set 1)

Section A (Key answers)

1. (d)
2. (c)
3. (d)
4. (b)
5. (b)
6. (b)
7. (b)

8. (c)
9. (c)
10. (a)

Section B

21. Series of organic compounds with same functional group and general formula.
22. CaO
23. Auxin
24. V = IR
25. Removes nitrogenous waste / maintains water balance

Section C & D

- Proper explanation + labelled diagrams
- Correct scientific terms
- Step-wise answers as per CBSE marking scheme

Section E

- Total resistance = 12 Ω
- Potential difference = 12 V
- Ohm’s Law